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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,378	Applicant(s) KELLY ET AL.
	Examiner DAVID E. HARVEY	Art Unit 2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 October 2008.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 2-7, 10-15 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 2-7, 10-15, and 17-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
 6) Other: _____

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1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 2-7 and 17 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention.

Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. For example, as recently underscored by the circuit court, with reference to past Supreme Court decisions:

"[t]he Supreme Court has recognized only two instances in which such a method may qualify as a section 101 process: when the process 'either [1] was tied to a particular apparatus or [2] operated to change materials to a 'different state or thing.'" See PTO Supp. Br. 4 (quoting *Flook*, 437 U.S. at 588n.9). In *Diehr*, the Supreme Court confirmed that a process reciting an algorithm could be statutory subject matter if it: (1) is tied to a machine or (2) creates or involves a composition of matter or manufacture.¹⁴ 450 U.S. at 184." (Emphasis added)

In re Comiskey, 84 USPQ2d 1670, 1678. (Fed. Cir. 2007)

While the instant claims 2-7 and 17 recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. Namely, as currently drafted, the pending claims fail to "tie" any one of the recited steps to disclosed structure. As such, each claim fails to tie the recited method/process to another statutory class. In this regard, it is noted that no "structure" has been recited in any one of these claims for performing any one of the recited steps. As such, this recited structure fails to "tie" the recited method to another statutory category.

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-7, 10-15, and 17-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) Line 8 of claim 2 includes the conditional "if" expression which suggests that the scope of the claim is inclusive of an "if not" state/condition too and, if so, that the limitation of lines 8-10 simply drop out of the claim. Thus it is unclear as to whether or not the limitations of lines 8-10 are actually required by said claim. It is suggested that the "if" expression be changes to --when-- to make it clear that the limitations of lines 8-11 must be true/occur at least some of the time. Similar clarification is needed in line 8 of claim 10, and line 7 of claim 18.

B) Lines 5 and 6 of claim 2 are confusing because they recite a step of "mapping select frames from the data stream" but fail to set forth as to what they are being mapped. Clarification is needed. Similar clarification is needed in: lines 5-6 of claim 10; lines 5-6 of claim 17; and lines 5-6 of claim 18.

5. Preface to the Section 102 and 103 rejections:

A) Lines 8-10 of claim 2 recite:

"wherein if the event occurs between a first and second frame in the recorded data stream, the event is mapped so as to occur between the mapped first and second frame in the interactive trick play stream"

It is noted that the claim never defined or sets forth the relationship between the recited first and second frame. Thus, broadly construed, the recited first frame may be read on the very first frame of a video program sequence being played in the trick mode whereas the second frame may be read on the last frame of video program sequence being played in which case any/all intervening events that are mapped to the sequence in the trick play stream necessarily occur between the first and second frames. Thus any/all prior art systems which map linear events to the non-linear trick mode sequence meet the limitations of claim 2.

The point being that claim 2, as currently recited, fails to identify the first and second mapped frames as being successive video frames of the trick play streams and, therefor, can be construed as any two frame of the stream. When construed as the very first and the very last frames of the stream, all intervening mapped events necessarily occur there between.

B) The following is noted:

1) To perform trick mode operations, the number of frames in an original normal-play video data stream must be changed with respect to the trick mode stream. For example, to produce a fast forward effect, selected ones of the frames from the original video stream are typically selected and transferred to into the trick mode stream while the frames that occur between the selected frames are typically "discarded".

The examiner also notes that many algorithms exist in the prior art for determining the way in which frames of the original normal play video data stream are to be "**mapped**" (i.e., selected and transferred) to the trick mode stream and the way in which non-selected frames are to be "discarded". U.S. Patent #6,621,979 to Eerenberg as being illustrative of one such conventional **mapping** scheme.

2) Turning to the description and claims of the instant application, it is the examiner's current understanding that the disclosed and recited "mapping" scheme is, like that of the prior art, simply an algorithm for determining which frames in the original normal speed video signal are to be selected and transferred (i.e., "**mapped**") into the trick mode data stream and which are to be discarded.

That is, for the purpose of this Office action, the recited "mapping" terminology, and the recited "mapping scheme" terminology, have

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been interpreted/construed as encompassing any process of selecting video frames that are to be transferred between an original normal play video data stream and a trick mode data stream.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Document #11-149717 to Kitamura (machine generated translation attached hereto):

As shown in Figure 1, Kitamura describes a system for synchronizing sub-picture display "events" of a sub-picture display "application" to the video data streams during both:

- 1) "Ordinary" real-time linear reproduction of the video data stream; and
- 2) "Trick play" non real-time nonlinear reproduction of the video data stream.

As shown in Figure 5, the system described by Kitamura comprised:

- 1) Circuitry (e.g., @ Figure 1) for:
 - a) **Commencing** the ordinary real-time linear play of the video (@ Figure 5A) wherein the ordinary play is "commenced" by the circuitry, at least illustratively, at frame "0" of said Figure 5A; and
 - b) **Mapping** sub-picture display "events" to the video data stream [@ Figure 5B] during the ordinary real-time reproduction mode of the video data stream;
- 2) Circuitry (e.g., @ Figure 1) for:
 - a) **Entering** a non real-time play back phase/mode of operation in which selected frames of the video data stream (@ Figure 5A) are mapped to create a trick play stream (@ Figure 5C) wherein:
 1. The non real-time phase/mode is "entered", at least illustratively", at frame 0 of said Figure 5C; and
 2. The non real-time phase/mode is illustrated as a 4X fast-forward operation; and
 - b) **Mapping** the sub-picture display events of the linear sub-picture display application (e.g., @ Figure 5B) to the trick play video stream (@ Figure 5C) to create a modified sequence of sub-picture display events (@ Figures 5D and/or 5E),
wherein, as illustrated, the each of the mapped sub-picture display events occurs between first and second frame of the video data stream.

[e.g., Note paragraphs 0008, 0010, 0014, and 0039-0043 of the attached translation]

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8. **Claims 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Document #11-149717 to Kitamura for the same reasons that were set forth above for claim 2. Additionally:**

A) With respect to claim 3:

The equation set forth in claim 3, as currently understood by the examiner, indicates that the timing of the "events" are mapped to the trick mode sequence proportionally to the fast forward mode. Such is clearly shown by the mapping performed between Figure 5B and 5D of Kitamura.

B) With respect to claim 5:

The system disclosed by Kitamura operates base on timing signals within the data streams and required no user inputs.

9. **Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Document #11-149717 to Kitamura for the same reasons that were set forth above for claim 2. Additionally:**

It is noted that the "means" recited in claim 10 corresponds to the structure illustrated in Figure 1 of Kitamura which, as addressed above with respect to claim 2, provides each of the recited operations/functions associated therewith.

10. **Claims 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Document #11-149717 to Kitamura for the same reasons that were set forth above for claim 10. Additionally:**

A) With respect to claim 11:

The equation set forth in claim 11, as currently understood by the examiner, indicates that the timing of the "events" are mapped to the trick mode sequence proportionally to the fast forward mode. Such is clearly shown by the mapping performed between Figure 5B and 5D of Kitamura.

B) With respect to claim 13:

The system disclosed by Kitamura operates base on timing signals within the data streams and required no user inputs.

11. **Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Document #11-149717 to Kitamura for the same reasons that were set forth above for claim 2. Additionally:**

It is noted that the "system" recited in claim 18 corresponds to the playback device to which Kitamura is directed whereas the recited "mapper" of claim 18 corresponds to the structure illustrated in Figure 1 of Kitamura which, as

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addressed above with respect to claim 2, provides each of the recited operations/functions associated therewith.

12. Claims 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Document #11-149717 to Kitamura for the same reasons that were set forth above for claim 18. Additionally:

A) With respect to claim 19:

The equation set forth in claim 11, as currently understood by the examiner, indicates that the timing of the "events" are mapped to the trick mode sequence proportionally to the fast forward mode. Such is clearly shown by the mapping performed between Figure 5B and 5D of Kitamura.

B) With respect to claim 21:

The system disclosed by Kitamura operates base on timing signals within the data streams and required no user inputs.

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13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The examiner notes that the following rejections based on Newman et al.
correspond to rejections made against original claims 1 and 8 in the Office action
mailed 6/26/2008. It is believed that these rejections are equally applicable to
currently pending claims 2 10 and 18 given the issues addressed above in
paragraphs 4 and 5 of this Office action.

14. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Document #2002/0133826 to Newman et al.

1. Preface:

See paragraphs 4 and 5 of this Office action

2. The showing of Newman et al.

As is shown in figure 8, Newman et al disclosed an apparatus (@555) for handling:

- A) A digital MPEG video data stream received from a head-end (@ 400) and stored (@550) locally on a PVR (@ 550 and 570);
- B) And a related interactive linear application received from a server (@ 200) and stored (@ 560) locally on a PIR (@ 560 and 580).

As described [note paragraphs 0046 and 0047], the apparatus comprises:

- A) A first playback means (@ 570) for playback of the digital video data stream from the storage device (@ 550) at a normal linear rate, and for performing various time modification operations, e.g., via various interactive trick modes of operation (i.e., fast forward, rewind, pause), thereby causing the video data stream to be played at non real-time rates [note the last three lines of paragraph 0047]; and

- B) A second playback means (@ 580) for playback of the interactive linear application from the storage device (@ 550);

wherein the second playback elements receives video frame marking information from the first playback means for mapping interactive events of linear application to the frame of the video data stream being played back from the first playback means, thereby allowing the second playback means to the same time modification operations as the first playback means.

2. Differences:

Claim 1 differs from the showing of Newman et al only in that claim 1 describes the trick play mode for the data stream as being created using a "mapping scheme" for mapping selected frame of the original video into the trick play stream and for mapping events of the application to the trick play stream.

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3. Obviousness:

The examiner takes Official Notice that it was notoriously well known in the art to have used an algorithm, i.e., a "mapping scheme", to convert an original normal play data stream into a trick play data stream. The examiner maintains that it would have been obvious to one of ordinary skill in the art to perform the data stream conversion that is required in the system disclosed by Newman et al using such well algorithms in view that:

- a) Newman et al does not disclose the specific as to how the conversion was to be performed and thus relied on the prior art for such details; and
- b) Stream conversion algorithms, i.e., "mapping schemes", represented the prior art on which Newman et al relied for such details.

The examiner notes that with respect to the modified system, events within the linear application stream would be mapped into the trick mode stream by the same algorithm given the fact that the application stream is lock to the frame markers signal.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Document #2002/0133826 to Newman et al. for the same reasons that were explained with respect to claim 1. Additionally:

- 1) The recited "means for commencing" by the element the PVR element (@ 570) in figure 5 of Newman et al.;
- 2) The recited "means for mapping selected frames" is also by the PVR element (@ 570) in figure 5 of Newman et al.;
- 3) The recited "means for mapping events" is met by the PIR element (@ 580) in Figure5 of Newman et al.

16. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Document #2002/0133826 to Newman et al. for the same reasons that were explained with respect to claim 10.

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17. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #7,000,246 to Takao.

I. The showing of Takao:

As shown in Figure 43, Takao discloses a system for recording and reproducing a digital data stream that is associated with a "linear" interactive application. As described (e.g., Note: lines 13-43 of column 28; and lines 14-34 of column 34), the system comprises:

- A) A recording medium (@ 44) having stored thereon:
 - 1) Video data stream representing linear real-time video data; and
 - 2) Associated "application control codes" for causing the linear application to be executed;
- B) A playback device (@ 32) for commencing normal linear playback of the linear real-time video data and commencing the running of the linear application in response to the associated "application control codes" reproduced therewith; and
- C) Said playback device (@ 32) which, upon entering a non real-time special playback mode, causes:
 - 1) The video data to be reproduced from the medium (@ 44) and converted (@ 63) into a form needed to produce the special playback; and
 - 2) The execution of the linear application to be suspended/paused via, for example, removing the "application control codes" from the reproduced data stream.

Given the above, it is the examiner's position that the presence/absence of the "application control codes" in the reproduced data stream effectively causes a "pausing" and "un-pausing" in the execution of the linear application; i.e., it is paused during the special reproduction mode(s) and is un-paused during the normal reproduction mode.

II. Differences:

Claim 17 differs from the showing of Takao only in that Takao does not state that the conversion of the data stream in the special reproduction mode entails a "mapping of frames" of the recorded video data.

III. Obviousness:

The examiner takes Official Notice that it was notoriously well known in the video reproduction art to have generated special reproduction modes by selectively reproducing selected frames of the recorded linear real-time video signal. The examiner maintained that it would have been obvious to one of ordinary skill in

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the art to have implemented the special reproduction mode conversion required in [Takao](#) (i.e., @ 63) using such conventional selective frame reproduction techniques. Such a process constitutes "frame mapping" in the sense that frames from the linear stream are mapped in the special mode stream.

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18. Japanese Patent Document #2001-157175 to Hori et al (machine generated translation attached hereto) has been cited because it described a mapping system for mapping different types of multimedia information to each other during trick reproduction operations.
19. Claims 4, 6, 7, 12, 14, 15, 20, and 22 avoid the art of record.
20. The drawings are objected to because the block of Figures 1, 2, 3a, 3b, and 5 should include descriptive labels. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E. HARVEY whose telephone number is (571) 272-7345. The examiner can normally be reached on M-F from 6:00AM to 3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Marsha D. Banks-Harold, can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/DAVID E HARVEY/

Primary Examiner, Art Unit 2621

**DAVID E HARVEY
Primary Examiner
Art Unit 2621**